PLUMAS FOREST PROJECT

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Comments on the Gibsonville Healthy Forest Restoration Environmental Assessment

Background

I have a long history of activism on the Plumas National Forest but had to mostly drop out for several years in the recent past. These are my first comments on a Feather River District project in a long time.

To give a little background of my involvement on this District and the PNF in general, I appealed the nearby Howland Flat timber sale in the early 1990s on the basis that the newly minted CASPO Guidelines were not being followed with regard to residual basal area calculations. I succeeded in that appeal with the result being that ten-percent more volume was left in the largest trees when the proper calculations were applied. It was a common problem, rangewide, so direction went out from the Region to all CASPO Forests to use the proper method and, thus, thousands of the largest trees were appropriately preserved on subsequent CASPO timber sales throughout the Sierra.

Later, I amicably resolved two other appeals with the Feather River District Ranger, Bruce Bernhardt. These also resulted in improved conservation management.

Another success came on the old Quincy District (now Mt. Hough) of the Plumas National Forest in 1997 when I created variable-density thinning (VDT) as an alternative to the even-space thinning only, proposed action (I didn't give the method a name, but described the clumps and gaps rationale). To my knowledge, the concept of VDT was previously unheard of and even-spacing was used exclusively on all CASPO fuel reduction projects throughout the Sierra up until that time. It was the Camp Project in Meadow Valley and I worked with District Silviculturalist, Dennis Clemons, to bring my ideas to fruition. He did an excellent job and it became the chosen and implemented alternative.

Taken together, Figures 1. and 2., below, show Dennis fleshing out of my observational-based comments into a science-based alternative. We were both feeling our way through it at this point. Also, notice the level of cooperation evident in the “We need to ask John…” italicized section.

Figure1.

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Definitions:

Proposed Action Desired Condition: relatively uniform spacing over broad areas. Spacing controls the trees which will be left regardless of diameter (subject to limits established by the CASPO Interim Guidelines). Fuel loading reduced to 10-15 tons/acre. Number of seedlings and saplings reduced by at least 70%. Underburning would prune lower limbs of conifers.

Large tree:

Alternative Desired Condition: (from #5, bottom of page 4). A lace-like network of essentially "tree-free zones" would surround clumps of larger trees. "Tree-free zones" would be selected only from aggregations which have an average diameter less than 15 inches dbh. Within the "tree-free zones," trees equal to or greater than 15 inches would be retained. The 'tree-free zones" could be as wide as up to twice the distance calculated for uniform spacing, but not greater than 40 feet. "Tree free zones" would be oriented perpendicular to the most probable direction of fire-spread. Where practical, "tree free zones" would connect to natural openings.

The basis for this alternative desired condition comes from observation of an unlogged area to the west, which is contained in a SNEP Area of Late Successional Emphasis (ALSE). In this area there were groups of large, closely spaced trees occupying perhaps a half acre, and scattered large trees adjacent. This pattern repeated itself in an irregular pattern across the landscape. These groups probably survived wildfires because the dense canopy closure tended to suppress vegetation that otherwise would create fuel ladders. Thus, there was not a significant buildup of ground fuels or fire ladders. Any ground fires tended to stay on the ground. In addition, the fire-thinned areas around the clumps provided protection from crown fires.

(It's not clear how alternative management practices 5A-5D fit with the desired condition described above. We need to ask John for clarification regarding the conditions which would trigger the application of practices 5A-D compared to the above description of desired condition.)

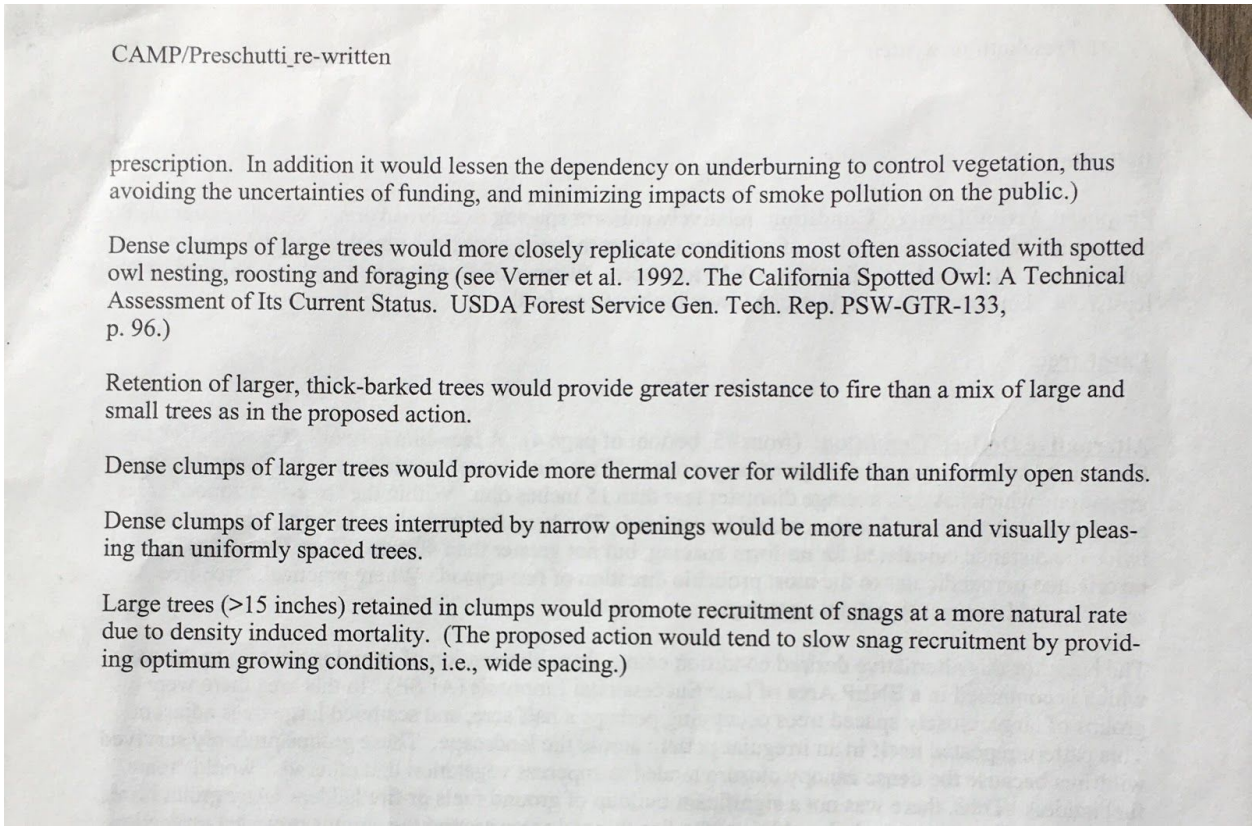
Effects of Achieving the Alternative Desired Condition Compared to the Proposed Action:

Spread of crown fire would be interrupted by gaps in the stand (rather than gaps between individual tree crowns, as in the proposed action. Gaps between individual trees would be relatively short-lived compared to gaps in the stand).

Dense canopy closure in the clumps would provide a more fire-resistant microclimate (SNEP Report, Volume II, Chapter 44, Fire-Silviculture Relationships in Sierra Forests: "A related but separate kind of concern has to do with changes in microclimate brought about by stand opening. Thinning or otherwise opening up a stand allows more solar radiation and wind to reach the forest floor. The net effect, at least during periods of significant fire danger, is usually reduced fuel moisture and increased flammability (Countryman 1955). The greater the stand opening, the more pronounced the change in microclimate is likely to be."

Dense canopy closure in the clumps would shade out vegetation, especially shrubs and saplings which create fire ladders, that might otherwise thrive in the more open conditions created by a uniform spacing

Figure2.



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prescription. In addition it would lessen the dependency on underburning to control vegetation, thus avoiding the uncertainties of funding, and minimizing impacts of smoke pollution on the public.)

Dense clumps of large trees would more closely replicate conditions most often associated with spotted owl nesting, roosting and foraging (see Verner et al. 1992. The California Spotted Owl: A Technical Assessment of Its Current Status. USDA Forest Service Gen. Tech. Rep. PSW-GTR-133, p. 96.)

Retention of larger, thick-barked trees would provide greater resistance to fire than a mix of large and small trees as in the proposed action.

Dense clumps of larger trees would provide more thermal cover for wildlife than uniformly open stands.

Dense clumps of larger trees interrupted by narrow openings would be more natural and visually pleasing than uniformly spaced trees.

Large trees (>15 inches) retained in clumps would promote recruitment of snags at a more natural rate due to density induced mortality. (The proposed action would tend to slow snag recruitment by providing optimum growing conditions, i.e., wide spacing.)

The first time it was actually called variable-density thinning was on the immediately subsequent Mt. Hough District “Antelope and Border Defensible Fuel Profile Zone Project”.

In Figure 3., below, I've literally cut and pasted a section of the BA/E, naming and describing the method, onto the cover of the report to document that occurrence as well as to show the value to wildlife of variable-density thinning. As noted by the use of the two different methods on this project, it wasn't universally accepted on all projects as it appears to be now, but it was a start.

Figure 3.

HARVESTING TECHNIQUES

This section will address general effects related to the different harvesting techniques proposed in both alternatives A and C; variable-density spacing (units 10-16), and even-spaced thinning (units 1,2,4,5,8.21.22.24. and 30-32).

Variable-density spacing (units 10-16)

This prescription emphasizes cutting in the smallest diameter classes (except for high risk trees of larger diameters) thus preserving nearly all of the largest, fire resilient, dominant and co-dominant trees. In this prescription most suppressed and intermediate trees are removed, along with the poorest growing co-dominant trees. Variable-density thinning from below (units 10-16) would retain clumps of larger trees, with openings between those clumps. Canopy cover over the stand as a whole would average 40%, but could range as high as 90% within clumps. This will maintain vegetative structural complexity and diversity and release the dominant and co-dominant trees allowing them to develop to larger diameters in shorter periods of time. This prescription will help maintain, and in the long run may enhance, the habitat quality required for old growth and large tree dependent species including the Northern goshawk, California spotted owl, great gray owl, American marten, and Pacific fisher. In addition, variable-density spacing in these units may help to maintain or enhance dispersal habitat for amphibians and turtles.

Even-spaced thinning (units 1,2,4,5,8,21,22,24, and 30-32)

In this prescription, trees would be cut from the full range of diameter classes (free thinning). In the short term, this will result in the removal of many large dominant and co-dominant trees to achieve even spacing between stems. Even-spaced thinning in these units would result in a fairly consistent, park-like structure throughout these stands. Average distance between the tips of tree crowns would result in canopy cover of 40% or more for each stand as a whole. This prescription will impact habitat quality for old growth and large tree dependent species including the bald eagle, Northern goshawk, great gray owl, American marten, and Pacific fisher by removal of structural components such as large trees, snags, and logs. Over time, the recovery of habitat for these species will be slower. In addition, the homogeneity of forest floor conditions and the loss of vegetative structural complexity and diversity under this prescription may result in a reduction of dispersal habitat for the California red-legged frog, mountain yellow-legged frog, and foothill yellow-legged frog. Under this prescription, a loss of potential large woody debris recruitment into stream channels may also occur further impacting amphibians.

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Over the years there were many other instances of my working with the Plumas National Forest to improve conservation measures. It may not have always seemed like that at the time but that's the way it worked out. It was always on a 90% volunteer basis and has been 100% for many years, now. It started in 1982 with the successful campaign to create the Bucks Lake Wilderness (over PNF objection) and then went on to Forest planning, and the GLG, etc. It continues to this day, with the Gibsonville Project, thirty-five years later. I don't like to bring all this up, but I feel it's necessary to help my current case by providing some institutional memory.

Handthin/Underburn and Underburn Only Alternative

In order to comply with the main project proposals to reduce the risk of wildfire and insect or disease infestation and to protect, restore, and enhance forest ecosystem components, I believe the most prudent and effective course of action would be to analyze and implement a handthin/underburn and underburn only alternative.

I have believed this for a very long time with regard to what the forest and its creatures need after the impacts associated with over a century of heavy resource extraction. But this notion was cemented in my mind when I saw the following in the May, 1998, Feather River District, French Creek Project EA:

"...fires that are carried through crowns, independent of ground fuels are relatively rare. More commonly, stand destroying fires spread by nearly continuous torching resulting from heavy ground fuels and fuel ladders." It goes on to state that: "...reductions in fire behavior occur when the fire front reaches a break in slope, *a change in ground or ladder fuels*, and human caused barriers. (emphasis added)

This was stated with no citations, as if it was common knowledge among people who had any experience with wildfire. However, more recently, studies have shown this common knowledge to have basis in fact as set forth in GTR 220, "An Ecosystem Management Strategy for Sierran Mixed-Conifer Forests", page 3:

"Some studies and models...suggest a crown fire entering a stand is rarely sustained (i.e., sustained only under extreme weather conditions) if understory fuels are too sparse to generate sufficient radiant and convective heat (Agee and Skinner 2005, Stephens and Moghaddas 2005)

2001 Framework Alternative

The Ea should also analyze a 2001 Framework alternative because of the US Fish and Wildlife Service's current 90-Day Finding on a Petition to List the California Spotted Owl as Threatened or Endangered, which found that a primary threat to the owl was the logging that has occurred under the standards and guidelines of the 2004 Framework. The chief directive with regard to the intensive cut levels referred to in the Petition and Finding actually came after the 2004

Framework Decision in the form of a letter from the Regional Forester, dated, July 14, 2004, wherein it states:

“Therefore, when designing thinnings ensure that density does not exceed an ***upper*** limit (for example: 90% of normal basal area, or 60% of maximum stand density index); this is a prudent way to avoid health risks associated with density. Design thinnings to ensure that this level will not be reached again for at least 20 years after thinning.” (emphasis in original)

The intention for this project to implement this direction is paraphrased on page 11 of the Gibsonville EA wherein it states: “However, the desired tree per acre in the fuels reduction units would be lower [than normal] in order to ensure the effectiveness of the treatments for a 10 to 20 year period.”

As stated above, with this direction in place, the primary driver of the 2004 heavy cutting prescription responsible for CSO decline will go forward on this project. The Interim Recommendations for Management of the California Spotted Owl as an alternative becomes largely irrelevant because its cutting prescriptions are discretionary, with the only real limit being a no-cut above 30” dbh.

A 2001 Framework alternative would resolve this obvious potential gap in the protection of the spotted owl. The primary components of that plan were a strict 20” dbh upper diameter limit, and flame length and height-to-live-crown requirements that resulted in trees being cut for fire and fuels considerations that were usually 12” dbh or less. (You could look that up, but as an example, a number that I seem to remember for the Kingsbury/Rush DFPZ was 8”?)

Aspen Restoration

I don't believe in aspen restoration through mechanical means, although I think there are a lot of well-meaning people who believe otherwise. I have spoken with both Wayne Sheppard and Dale Bartos on the subject and I believe I might compromise in this view if they were in charge. However, my direct, on the ground experience with projects on the Lassen, Plumas, and Tahoe National Forests have led me to believe that managers on these projects were, to use a western phrase, hell-bent for leather to cut as many large conifers as possible, with very little regard for other resource issues and tradeoffs.

Fire (and no-grazing) needs to be the primary agent of change with regard to aspen restoration. If fire is not allowed to visit aspen stands on a regular basis then no amount of thinning will change the aspen/conifer dynamic in the long-term. In fact, I have found that mechanical thinning churns up the soil allowing a very thrifty regeneration of conifers that in the absence of fire will re-inhabit the area. It's a simple equation: aspen, confers, soil moisture, and fire. Let them have their way and whatever results is what nature intended and is achieved with no cost to the taxpayer.

In this regard, I had interesting encounter on a recent PNF forest health restoration project field trip. During the Forest Service presentation on aspen I suggested letting fire do the restoration. In response the wildlife biologist said that wasn't feasible because “John, we put fires out” and that was the end of that. The virtual clearcutting of the aspen would go forward. Then we moved a few miles down the road to the fuels reduction area of the project where again, to promote the removal of very large trees, the fire specialist said “I don't want to scare you but fire IS coming so we have to separate the crowns!” I pointed out the dichotomy but aside from looking a little sheepish, there was no real response.

The point is, fire *is* coming and everybody knows it. Also, there is recent science indicating that, contrary to previous theories, high severity fire was actually a frequent visitor to Sierran forests, and plant and animal species depend on it for their survival -- like the black-backed woodpecker. Conifers in an aspen stand ironically actually help the aspen by helping to carry a fire through the stand at a higher intensity, thereby releasing the aspen. What remains is a snag-rich, “dead” forest for soil replenishment, woodpeckers, etc.

Anecdotally, I remember driving by such a stand shortly after the Antelope/Wheeler Complex fires. The conifers were gone, and in my minds eye, the aspen sucker leaves were the size of dinner plates.

The overall issue is complex and in that regard I have provided a lot of detailed comments on past FS projects. I haven't visited these stands with an eye toward evaluation so I'll keep this brief for now. Two overriding circumstances need to be considered when evaluating the viability of aspen. One is downcut steambeds caused by past Forest Service management that result in marginal soil-moisture availability. The more important circumstance is climate change. The usual aspen restoration protocol is to clearcut all but a few select conifers to at least a tree-length beyond the last aspen, no matter how straggly. It very well may be that a major factor with regard to aspen stresses might be a warmer, overall dryer climate, and that the conifers in this setting are moderating the micro-climate and helping to keep the aspen alive until the next fire. At that time the snags will continue to provide shade for a while and then pile up on the ground providing soil nutrients and protection. Contrast this to the planned immediate ripping up and removal of all conifers, churning up of the soil, and leaving the aspen grove to attempt to struggle along in the blazing sun and potential mega-droughts associated with climate change.

To date, the result of Forest Service analysis of climate change and the out-of-balance state of its forests, caused largely by logging, is the recommendation to do more logging. With regard to aspen regeneration, here’s a chance to take a harder look and reverse that recommendation.

Variable-Density Thinning

The Forest Service says they have been doing variable-density thinning, but they are not. By in large what I see on recently planned as well as completed projects is single-tree spacing with an occasional tree left next to another one.

As noted above, I have a lot of experience with variable-density thinning. The final iteration of my original “clumping and gaps” plan as described in the Camp EA stated: “In the clumps virtually all suppressed and intermediate trees would be removed, but virtually *none of the codominants.”* (emphasis added)

Even though leaving all of these trees was supported in the EA, because of the “radical” idea of leaving so much of the forest intact, there was resistance to it within the Forest Service and from the outside (timber interests, QLG). That being said, a few years later on the Stony Ridge DFPZ Project the proposed action, while not leaving every dominant and codominant, did a reasonable job of describing how to retain the vast majority of them in clumps of up to six trees.

However, the 2001 Framework interceded the completion of the EA and the final alternative description stated: “This alternative does not include the harvesting of codominant or dominant trees in the DFPZ.” I visited the entire project area before and after completion and this is exactly what happened.

Now, along comes the interagency “Forests and Rangelands National Fire Plan Success Story” website, featuring the Stony Ridge DFPZ Project. Here is that story in its entirety:

“The Stony Ridge DFPZ is located on the Plumas National Forest, Beckwourth Ranger District. Stony Ridge is adjacent to the Anyelope Lake Recreation Area, as well as the communities of Janesville and Milford. The project area is comprised of Eastside Pine, mixed conifer, timber, sage, bitterbrush, and grass.”

“The intent of the Stony Ridge DFPZ is to promote the ecological and economic health of the national forest and surrounding communities. This was accomplished by mechanical thinning in the conifer stands, hand thinning, prescribed burning, grapple piling, and mastication of fuels. The bulk of the work occurring on Stony Ridge DFPZ was accomplished by two separate contract entities, Firestorm and Summit. Thinning has reduced canopy cover and ladder fuels. Open forest stands dominated by fire resistant tree species and crowns sufficiently spaced to limit the spread of crown fire are the results of these actions.”

“The project was completed three years prior to the ignition of the Antelope Complex. On the Wheeler fire of the Antelope Complex, Jo Ann Fites, Fire Behavior Assessment Team, produced a lengthy report regarding fire behavior, suppression, fuel treatment, and protected areas. According to her report, throughout the fire, firefighters utilized fuel treatment areas when nearby to conduct their operations. The Stony DFPZ was on the east flank of the fire. Photo

documentation shows that spot fires went out or were easily contained by fire suppression resources."

"At one point in the fire, members of the team and senior fire staff from Plumas National Forest were cut off from their escape route by intense crown fire. These people were able to safely exit the area through a DFPZ that moderated fire behavior."

"In several areas of the Stony DFPZ, direct attack was possible, thereby minimizing resource damage. This included stands where tree mortality was minimal due to the DFPZ being in place prior to ignition."

It's hard to know where to start on this heavily apocryphal document. It is totally wrong about the nature of the cutting prescription. There were no "...crowns sufficiently spaced to limit the spread of crown fire…" because the entire crown layer of codominant and dominant trees was left intact, as noted in the EA.

What it did get right was that, as predicted in my original variable-density plan for the Camp Project, which also retained all codominant and dominant trees, the similar Stony Ridge DFPZ Project performed perfectly with regard to fire spread, intensity and fire-fighting considerations. And all of this concluded by a Forest Service Fire Behavior Assessment Team specifically charged with the duty to assess and ultimately confirm that fact.

To review, this success should be seen as a reason to analyze the two, low-impact Handthin/Underburn and 2001 Framework Alternatives suggested above. Given that there is a reasonable chance that these alternatives will work to adequately alleviate fire and fuels concerns while at the same time addressing issues having to do with heavier cutting prescription proven negative effects on the California spotted owl, then assessing, and, in my opinion, ultimately choosing one of them is the right and prudent thing to do.

<u>Potential Bark Beetle Infestation</u>

I didn't hear about this EA until last week so I am running out of time on this Friday afternoon, the last day to comment, so I'll make this brief. There is a lot of top-notch science out there regarding severe bark beetle infestations and whether or not logging is an appropriate response. I'm in favor of the science that says it's not. I'm a firm believer that the forest can largely manage its own affairs far better than we can, even after a century of mismanagement.

This is only the tip of the iceberg with regard to my ideas on these subjects, both in my notes and in my head, but as I say, I've run out of time. However, I hope this will suffice to start a renewed dialogue that will result in improving forest health, as it has in the past.

Thank you for your consideration, John Preschutti, Director, Plumas Forest Project